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09/30/2003 04:32 PM

To: Nabil Fayoumi, sandra bron cc Ning.Li, Peter Barrett
Subject Weekly Oversight Report for SA2, week ending 9-27-03

Nabil and Sandy,

Attached please find the weekly summary report for the oversight at Site R. Please call if you have any questions or would like an update of the graphs and table.

Thanks, Clair.

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Weekly Summary Report

USEPA Oversight, Sauget Area 2, Sauget, IL

WA No. 137-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Saturday September 27, 2003

This report summarizes the Remedial Action (RA) work conducted by Solutia and its contractors from September 22, 2003 through September 27, 2003. The current RA fieldwork consists of construction equipment mobilization, site preparation, and barrier wall trenching.

Contractors Onsite

URS (primary consultant for Solutia)
Inquip Associates Inc. (barrier wall construction contractor)
Pangea Group (construction support services, primary subcontractor to Inquip)
Strata Services (jet-grouting contractor for Ranney well)
Layne Western Drilling Co. Inc. (sub-contractor to Strata Services, driller for Ranney well)
Roberts Environmental Drilling Inc. (driller onsite to abandon leachate well)
Zahner Surveyors (surveyors)
Golder Associates (consultant to Solutia for groundwater issues)

Work Performed This Week

Groundwater Migration Control System

The Groundwater Migration Control pumping system was adjusted in flow rate during the week for American Bottoms to continue to monitor their treatment systems with an increased flow rate. For 48 hours between September 23 and 25, the groundwater pumping system operated at a flow rate of 1000 gallons per minute (333 gallons per minute per extraction well). During this time period a drawdown of at least one foot was observed in the four upgradient piezometers, as measured by their transducers. The valves inside the vaults that had partially restricted flow to accommodate the low flow rates were fully opened and remained open after the test. The flow rate was decreased back to 210 gallons per minute on September 25, 2003.

Construction Equipment Mobilization

Parts for the second clamshell rig (KS#2) continued to be delivered to the site during the week. The crane body is yet to arrive on site. Bentonite granules, which will be used to mix the soil-bentonite backfill to construct the barrier wall, arrived on site in 4000-pound "super-sacks".

Site Preparation

Pangea began to construct the engineered inner berm for the spoil containment area on top of the landfill. This temporary stockpile area, roughly 900 feet long and 350 feet wide, will be used to store the excess spoils from the barrier wall trench. Clean "borrow soil" – a silty

clay, was trucked into the site. The berm will be constructed in one-foot lifts, compacted at each lift to specifications. The first lift was constructed along the southern horseshoe-shape of the spoil containment area to the south of the access road. Initial compaction was performed on the first lift of the berm.

Pangea also completed construction of a rock "observation road" located on top of the landfill. The road extends from Riverview Avenue southward to near the spoil containment area. The observation road will provide viewing access of the spoils after the spoils are transported to the containment area.

Stabilization Issue

A decision regarding the stabilization issue was agreed upon between Solutia and Inquip and their engineers (URS / Solutia and Muser Rutledge / Inquip) during the week. The solution to end the stability problem is to raise the work-platform with rock at least 2 feet higher than the current ground surface and to install wicks along the length of the 'stabilization area'.

The work platform will consist of plastic geonet placed on the ground surface with rock placed on top and compacted in place. The workpad will serve the purpose of providing a solid and stable bed for the trackhoe and clamshell rigs to work on and additionally will raise the ground surface adjacent to the trench. Therefore an extra two feet or greater in height of slurry will be able to fill the trench – which exerts an extra 78 pounds per cubic foot of pressure on the walls of the trench. Thus, additional pressure will be provided on the sides of the trench in the area where soil stability was an issue to safeguard against trench collapse.

The wicks are porous fabric sections that are designed to provide a relieving pressure point for the soil adjacent to the trench. Consequently, if pore pressure builds in the soils underlying the workpad for the crane during activity in the trench, it will have a place to act as a vent, ensuring soil liquification is not an issue while operating heavy equipment in the trench.

Slurry Mixing

Approximately 75 tons of bentonite gel was used to mix 300,000 gallons of slurry this week. The slurry, when pumped from the south holding pond to the trench, was tested frequently to assess its viscosity and adjusted with a water blending pump as necessary. The viscosity of the slurry was measured by recording the time to filter the slurry into a fixed volume container. All the viscosity values obtained during the week were satisfactory.

Barrier Wall Construction

Inquip has opened the trench to approximately 350 feet in length along the barrier wall alignment, from station 27+50 toward station 24+00 (please refer to Solutia's map for location). The KH1266 trackhoe was used to excavate the trench up to 95 feet in depth. Initially the KH1266 trenched to about 85 feet, but after the progress of the clamshell rig was slower than anticipated, the trackhoe started to excavate to its' maximum depth.

The first clamshell rig (Liebherr 843) experienced mechanical problems and was functional for approximately 2 ½ days of the 6-day workweek. A Solentanche mechanic experienced with the Liebherr crane and hydraulic clamshell rig was onsite starting September 22, 2003 to assist in maintaining the rig. Additionally, two mechanics from the crane manufacturer

Liebherr were onsite for part of the week.

Bentonite slurry was pumped into the trench as needed to keep the excavation open. The depth to slurry in the trench was consistently maintained at less than two feet below ground surface. The slurry in the trench, together with the slurry from the south holding pond, were tested two to three times a day for the following parameters: viscosity, density, filtrate loss, pH, and sand content. The test results were satisfactory and met the minimum requirements specified for the barrier wall construction.

Trench depths were measured every 20 linear feet of trench excavated. Trench depths were also measured at the end of the day and at the beginning of the next day to evaluate if any cave-ins or slurry settling had occurred overnight. The final depths of the barrier wall trench at the end of the week are shown in Table 1. Construction progress by September 27, 2003 was depicted below.

Graph 1 shows the progress of the trench excavation during the week in comparison to the previous week. Graph 2 shows the overall progress of the barrier wall construction.

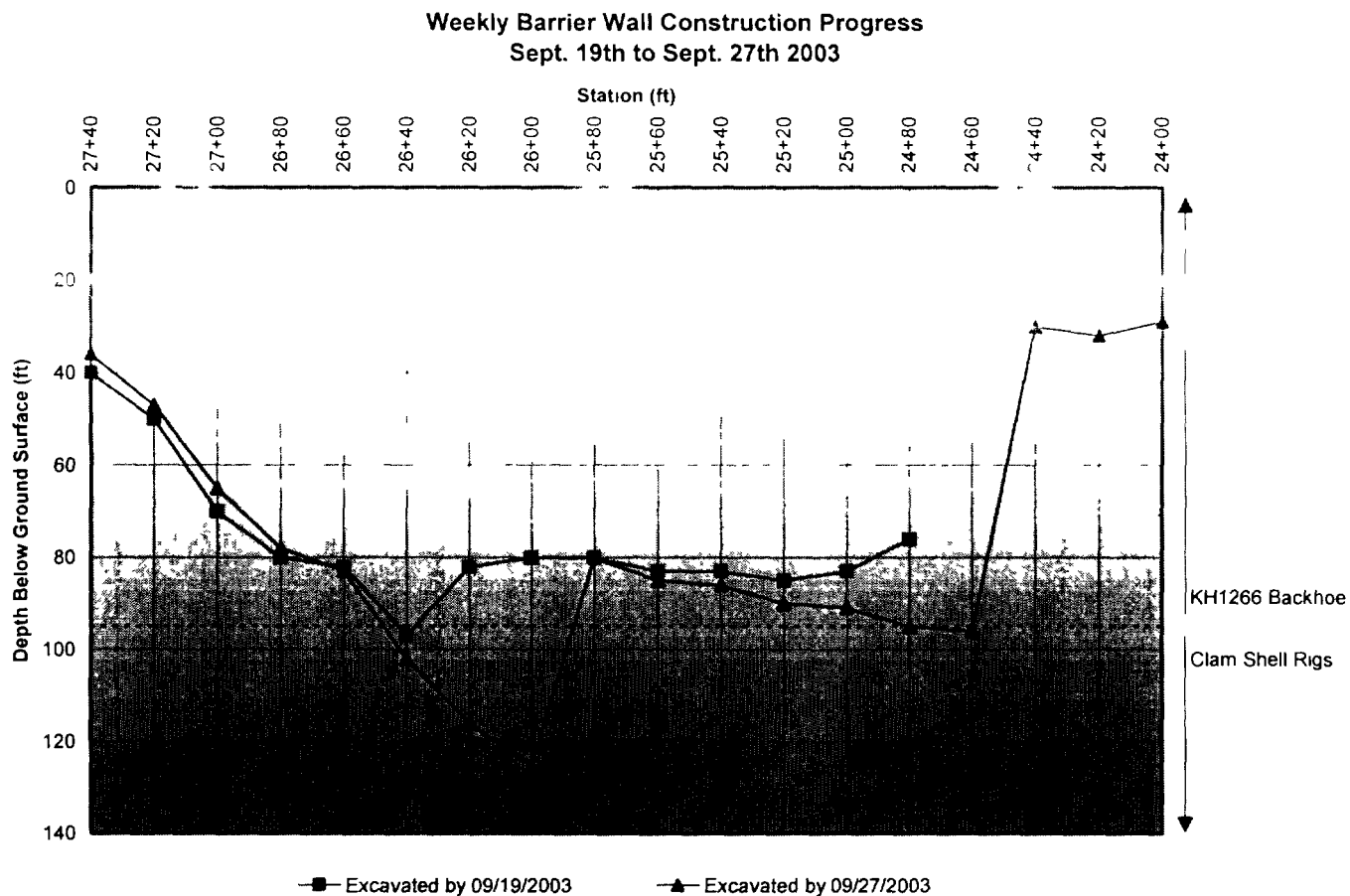
Table 1 – Depths-to-bottom Measurements for the Barrier Wall Trench (September 28, 2003)

Station ID	Depth to bottom (ft below ground surface)
27+40	36
27+20	47
27+00	65
26+80	78
26+60	83
26+40	102
26+20	113
26+00	125
25+80	80
25+60	85
25+40	86
25+20	90
25+00	91
24+80	95
24+60	96
24+40	30
24+20	32
24+00	29

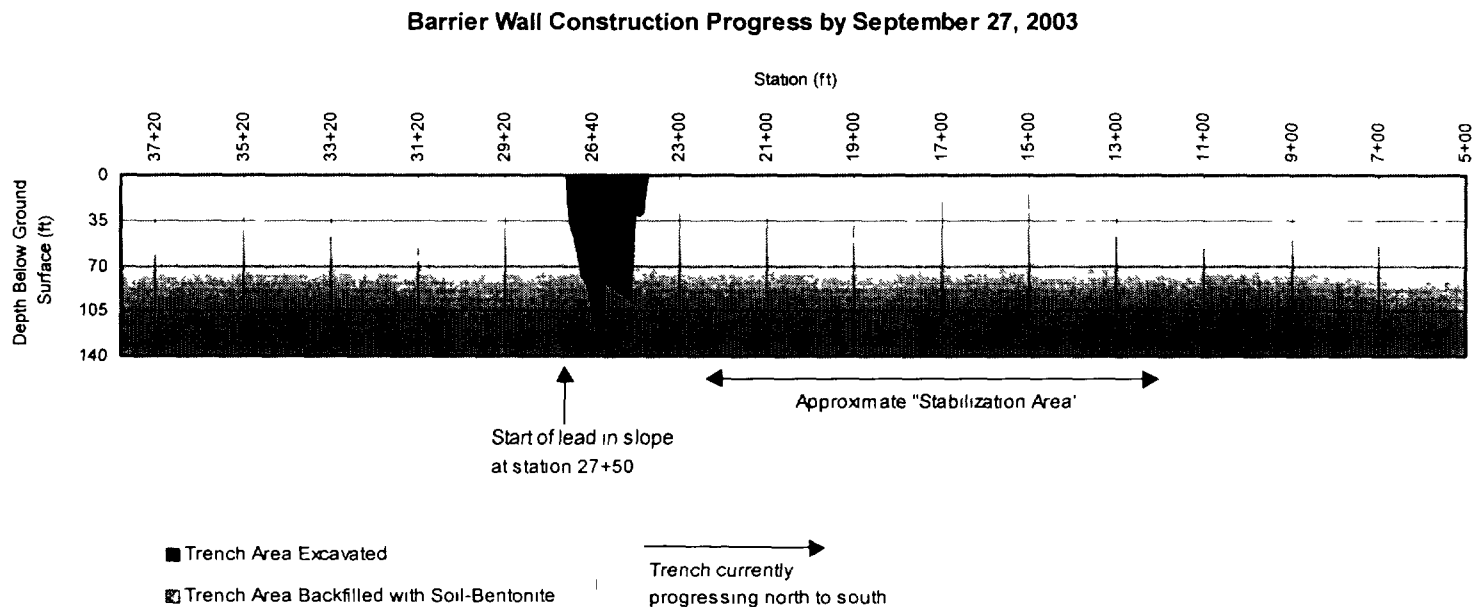
Note: trench depths were not measured at the end of workday on September 27, 2003.

Construction Progress

Graph 1



Graph 2



Ranney Well Grouting

Strata Services were contracted to pressure-grout the Ranney well to place a plug at the base of the well. The Ranney well is a decommissioned water extraction well with lateral pipes extending out (like spokes) from the base of the well. At least two of the lateral pipes will likely be transected by the barrier wall trench. Thus Solutia opted to pressure-grout the Ranney well to ensure that slurry would not be lost to the well when the laterals are transected. Strata Services designed and directed the drilling and pressure grouting, Layne-Western drilled and placed the grout pipes. UPS oversaw the grouting on behalf of Solutia.

On September 22, 2003, Layne started drilling with an Ingersoll-Rand TH-60 air rotary rig. Three holes were drilled inside the Ranney well to contain the grout pipes. Three grout pipes were installed in three days. A fine blue sludgy-material was found in the bottom 10 feet of the well. Design for the Ranney well seal was based upon a 30-percent void space in the clean rock material that was used as the fill material for the well, according to the decommissioning drawings. An expansive neat cement grout mixture including cement, class C ash, water and a penetrating compound was used to fill the void space during grouting. Twenty feet (vertically) at the base of the Ranney well was designed to be filled with the grout, resulting in approximately 810 cubic feet of grout (five cement truckloads).

Pressure grouting began on September 25, 2003 alternately into the three grout pipes in the Ranney well – initially set at depths between 90 and 100 feet below ground surface. The two open grout pipes were used to monitor the water levels in the well. After five truckloads of grout were placed in the well, no change in the water levels were observed. By the end of the day on the 25th, twelve truckloads or 1,944 cubic feet of grout were placed in the Ranney well, with an observed water displacement of 10 feet above static levels. The water displacement indicated that the grout was moving upwards in the well – displacing the water above the grout.

To ensure a complete seal of the well – an additional six truckloads of grout were placed in the Ranney well on September 26, 2003. This resulted in a water level rise in the well of 24 feet above the static level. In total, approximately 2,700 cubic feet (108 yards) of grout were placed in the Ranney well. The solid level of the grout in the grout pipe that remained open was measured on September 29 at 62.8 feet below ground surface – indicating that a 38.3 feet thick grout seal was placed in the Ranney well.

IDW Management

The drum carcasses found in June 2003 during trenching were disposed of during the week into the roll-off box containing other construction debris. The waste will later be taken to the Milam Landfill in Granite City.

Water and soil cuttings that were generated from drilling to install the grout pipe into the Ranney well were placed into a lined roll-off box. Because of the unexpected presence of fine materials in the bottom ten feet of the Ranney well, the liquid portion of the collected waste was sampled for waste characterization. The samples were sent to Severn Trent laboratories for the analyses of VOCs, SVOCs, pesticides, herbicides, metals, PCBs, and dioxins.

Other Activities

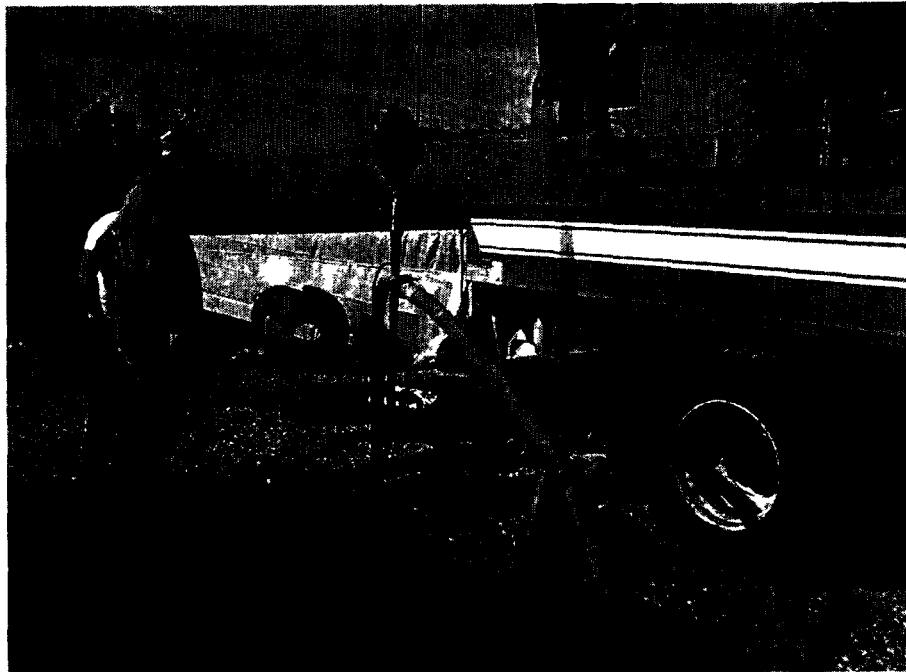
The Leachate monitoring well located on top of the landfill in the middle of the spoil containment area was abandoned during the week by Roberts Environmental Drilling. The

entire well casing was removed and the borehole filled with hydrated bentonite chips

Photos from week - September 22 through September 27, 2003:



Clean clays delivered to top of landfill – will be used to construct spoil containment berm
(September 24, 2003)



Strata Services grout the Ranney well (September 25, 2003)